

IN THE CLAIMS

Please amend Claims 1, 8 and 14. Please cancel Claims 11-13.

1. (Currently Amended) A method for forming a thin film on a semiconductor wafer comprising:

heating an internal environment of a process chamber to a steady-state processing temperature;

loading a semiconductor wafer into said internal environment of said process chamber;
introducing a reactive gas into said internal environment of said process chamber, with said reactive gas at a first partial pressure ~~relative to a chamber pressure of said internal environment~~;

adjusting said reactive gas from said first partial pressure to a second partial pressure; and

unloading the semiconductor wafer from said process chamber, while said internal environment of said process chamber remains at said steady-state processing temperature and while said reactive gas ~~internal environment~~ is at said second partial pressure.

2. (Previously Amended) The method of Claim 1, wherein said steady-state processing temperature is between 800° C and 1200° C.

3. (Previously Amended) The method of Claim 1, wherein said steady-state processing temperature is between 200° C and 800° C.

4. (Previously Amended) The method of Claim 1, wherein said adjusting of said first partial pressure to said second partial pressure comprises introducing an inert gas into said internal environment, wherein said second partial pressure between said reactive gas and said inert gas causes said reactive gas to be at a preselected partial pressure.

5. (Previously Amended) The method of Claim 4, wherein said preselected partial pressure of said reactive gas is between 0.1 Torr and 760 Torr.

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6. The method of Claim 4, wherein said inert gases is taken from the group consisting of argon, helium and nitrogen.

7. (Previously Amended) The method of Claim 4, wherein said preselected partial pressure of said inert gas is between 0.1 Torr and 760 Torr.

8. (Currently Amended) The method of Claim 4 ~~Claim 1~~, wherein said preselected partial pressure comprises a partial pressure of said process chamber between about 0.1 Torr and 760 Torr.

9. (Original) The method of Claim 1, wherein said reactive gas comprises a gas taken from the group consisting of O₂, NH₃, TaETO, NO, N₂O, and H₂O.

10. (Previously Amended) The method of Claim 1, wherein said adjusting includes introducing N₂ into said internal environment to reduce said first partial pressure to said second partial pressure.

11.-13. (Canceled)

14. (Currently Amended) A method of forming a thin film on a semiconductor wafer comprising:

heating a process chamber to a steady-state temperature;

establishing a first pressure in said process chamber;

loading at least one semiconductor wafer into said process chamber while said process chamber is at said first pressure;

introducing a process gas at a first partial pressure relative to said first pressure into said process chamber to allow processing of said at least one semiconductor wafer to commence;

varying said first partial pressure to a second partial pressure which causes said processing of said semiconductor wafer to cease; and

removing the at least one semiconductor wafer from said process chamber while said process chamber is kept at said steady-state temperature ~~second partial pressure~~.

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15. (Previously Amended) The method of Claim 14, wherein said steady-state temperature is a process temperature between about 800° C and 1200° C.
16. (Previously Amended) The method of Claim 14, wherein said first pressure is maintained in the range of between 0.1 Torr and 760 Torr.
17. (Original) The method of Claim 14, wherein said process chamber is a resistively heated furnace.
18. (Original) The method of Claim 14, wherein said process gas is O₂.
19. (Previously Amended) The method of Claim 14, wherein said varying said first partial pressure to a second partial pressure comprises pulling a vacuum pressure within said process chamber.
20. (Previously Amended) The method of Claim 14, wherein said removing the at least one semiconductor wafer from said process chamber while said process chamber is at said second partial pressure is accomplished while said second partial pressure is substantially at vacuum pressure.
21. (Original) The method of Claim 14, wherein said loading of said at least one semiconductor wafer is accomplished in the absence of substantially all oxygen.

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